

UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF MICHIGAN

CHROMAR SYSTEMS, INC.,  
d/b/a CMS TECHNOLOGIES, INC.,  
a Michigan Corporation,

Plaintiff,

v.

POWERDSINE LTD., an Israel Corporation,  
and POWERDSINE CORP., a New York  
Corporation,

Defendants.

Civil Action No. 01-74081  
Honorable Avern Cohn

CHROMAR SYSTEMS, INC.  
d/b/a CMS TECHNOLOGIES, INC.,  
a Michigan Corporation,

Plaintiff,

v.

FOUNDRY NETWORKS, INC., a California  
corporation,

Defendant.

Civil Action No. 06-13936  
Honorable Avern Cohn

CHROMAR SYSTEMS, INC.  
d/b/a CMS TECHNOLOGIES, INC.,  
a Michigan Corporation,

Plaintiff,

v.

D-LINK SYSTEMS, INC., a California  
Corporation,

Defendant.

Civil Action No. 06-13937  
Honorable Avern Cohn

**REPORT AND RECOMMENDATION OF SPECIAL MASTER CONCERNING  
DEFENDANTS' MOTION FOR APPLICATION OF COLLATERAL ESTOPPEL TO  
"GREEN BOOK" AND "AMD APPLICATION NOTE" PRIOR ART REFERENCES**

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## I. INTRODUCTION

Defendants have moved that plaintiff ChriMar be precluded from arguing certain issues that have been decided in the *Cisco* litigation concerning disclosure of claim limitations by the “Green Book” and “AMD Application Note” (“AMD”) references.<sup>1</sup> During the *Cisco* litigation, each of these references was found to anticipate claim one of the ’260 patent. *ChriMar Sys., Inc. v. Cisco Sys., Inc.*, 318 F. Supp. 2d 476, 492-508, 516 (E.D. Mich. 2004). The *Cisco* court’s finding of anticipation was a final judgment which actually resolved the issues in dispute and was fully and fairly litigated during the course of the *Cisco* litigation. For these reasons defendants’ motion for the application of collateral estoppel should be granted, and ChriMar should be precluded from rearguing the disclosure by the Green Book and AMD references of each limitation of claim 1 of the ’260 patent or the status of those references as prior art. The consequence of this judgment will be that to the extent a claim limitation from claim 1 is present in an asserted claim of the ’260 patent, that limitation is deemed to be disclosed by both the Green Book and the AMD reference, leaving only disputes as to whether limitations in the asserted claims which are not found in claim 1 are in fact disclosed by Green Book and AMD. Thus, while application of collateral estoppel does not result in summary judgment on the issue of validity, it will serve to greatly narrow the scope of the dispute concerning the validity of claims 14-17 of the ’260 patent over Green Book and AMD.

## II. DISCUSSION

Collateral estoppel in patent cases is a procedural determination governed by law of the regional circuit. *See Dana v. E.S. Originals, Inc.*, 342 F.3d 1320, 1323 (Fed. Cir. 2003). Thus, the district court must follow Sixth Circuit precedent on collateral estoppel. In the Sixth Circuit, application of collateral estoppel requires that the precise issue be raised and actually litigated; that the determination must have been necessary to the outcome; that the proceeding resulted in a

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<sup>1</sup> A full list of those findings is attached as Appendix A.

final judgment on the merits; and that the party against whom the estoppel is sought had a full and fair opportunity to litigate the issue. *U.S. v. Cinemark USA, Inc.*, 348 F.3d 569, 583 (6th Cir. 2003).<sup>2</sup>

### **A. Finality**

The prior ruling in the *Cisco* litigation was a final order for this purpose of this prong of the analysis. As an initial matter, the fact that the summary judgment in the *Cisco* litigation was only “partial” does not preclude application of collateral estoppel. *See Dana*, 342 F.3d at 1323. All that is necessary in this regard is that the issue that was the subject of the partial summary judgment be finally resolved, and that the parties have the opportunity to fully litigate that issue. *See In re Freeman*, 30 F.3d 1459, 1467 (Fed. Cir. 1994). Because a finding of invalidity is an ultimate issue in any patent dispute, the fact that other claims might have remained in the *Cisco* dispute following the partial summary judgment does not derogate from the finality of judgment on that issue. And the parties clearly thought the issue of the validity of claim 1 important in the *Cisco* litigation, and fully and fairly – indeed, vigorously – litigated the question there. *See Cisco*, 318 F. Supp. 2d at 489-90 (explaining that the special master was appointed due to the complexity of the issues and the volume of the papers, and noting that the parties produced extensive papers explaining the technology, and that the special master asked detailed questions). I note also that the *Cisco* judgment itself dedicates approximately seventeen pages to its own analysis of anticipation and the special master’s recommendations. *Id.* at 492-509.

The subsequent settlement of a dispute after the entry of a dispositive order does not defeat finality. *See, e.g., Employees Own Federal Credit Union v. City of Defiance, Ohio*, 752 F.2d 243, 245 (6th Cir. 1985) (holding that voluntary dismissal after dispositive ruling does not avoid preclusive effect of that ruling). This is particularly so where the losing party has the incentive

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<sup>2</sup> The parties dispute whether a four-factor or a five-factor test applies; Sixth Circuit decisions have used both formulations. The difference is the inclusion of the requirement that the party against whom the estoppel is sought have been a party (or in privity with a party) to the prior litigation as was the case in *Verizon North Inc. v. Strand*, 367 F.3d 577, 583 (6th Cir. 2004). I do not find it necessary to resolve the difference, because the presence of that requirement is not in dispute in this case.

to appeal the final determination. *Cf. Nat'l Satellite Sports, Inc. v. Eliadis, Inc.*, 253 F.3d 900, 909-910 (6th Cir. 2001) (lack of incentive to pursue an appeal as to an alternative ground for a decision cut against finding estoppel). If settlement revoked the preclusive impact of an earlier judgment, this would have the effect of allowing losing parties to pay money for the option to not have the doctrine of collateral estoppel applied to them. The purpose of the doctrine – to improve the procedural efficiency of the legal system and avoid repetitive litigation of decided issues – counsels against plaintiff's argument.

ChriMar argued at the hearing held to address the collateral estoppel issues that the third preamble clause of the *Cisco* settlement agreement precludes application of collateral estoppel. But in fact it does no such thing. That clause merely provides that “WHEREAS, Neither the negotiation, execution, nor performance of this License Agreement, nor anything contained herein, constitutes an admission of liability, infringement, or validity of the Licensed Patent on the part of Cisco.” ChriMar-Cisco Settlement Agreement.<sup>3</sup> This standard term merely provides that Cisco is not admitting liability in the settlement. It does not say anything at all about ChriMar's admissions. In any event, the settlement in the *Cisco* litigation came in the form of a dismissal with prejudice, not a consent judgment. 2:01-cv-71113, Agreed Order of Dismissal dated September 15, 2005. There was nothing about the order that manifested an interest in preserving the litigants' rights to relitigate decided issues. Indeed, the order itself was not conditioned on settlement, and there is nothing to indicate that Judge Cohn even had the settlement agreement before him when he dismissed the *Cisco* action pursuant to settlement. Thus, even if the settlement agreement indicated an intent to waive application of collateral estoppel – which it does not – the private intent of the parties does not prevent application of the doctrine.

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<sup>3</sup> The full Settlement Agreement is confidential. ChriMar sought to introduce it at the hearing; Power DSine objected. At my request, after the hearing defendants sought and received the permission of Cisco to reproduce the relevant language from the Settlement Agreement in this Report and Recommendation, without compromising the confidentiality of the remainder of the agreement.

## B. Actual Resolution

Next, the judgment of invalidity as to claim 1 in the *Cisco* litigation actually did resolve the issues in dispute, namely the predicate facts on which the validity of claim 1 of the '260 patent depended. In particular, each specific finding for which defendants seek to apply collateral estoppel is supported by a copious record. Indeed, most findings that provided the basis for the order were uncontested in the prior litigation. And in this motion, ChriMar does not contest the applicability of most of the proposed findings to which defendants seek to apply estoppel.<sup>4</sup>

Plaintiff's argument that the *Cisco* court's finding of both invalidity and noninfringement as to claim 1 of the '260 patent created an alternate basis sufficient to defeat collateral estoppel for each ruling is wrong. The Supreme Court has held that a finding of noninfringement does not defeat subject matter jurisdiction over a declaratory judgment action for invalidity. *See Cardinal Chemical Co. v. Morton Int'l*, 508 U.S. 83 (1993). *Cardinal Chemical* is based on the idea that infringement and validity are both ultimate issues in their own right, so that a finding of noninfringement does not moot a declaratory judgment action for invalidity. *Id.* at 99. A patentee whose patent claims are invalidated in one litigation may not reassert them in a new litigation merely because, in the earlier litigation, those same claims were also found not to be infringed. *See Mendenhall v. Barber-Greene Co.*, 26 F.3d 1573, 1583 (Fed. Cir. 1994). This holding is a proper application of the principle behind the holding in *Cardinal Chemical*. I reject

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<sup>4</sup> The only scintilla of doubt relates to whether the issues in dispute in *Cisco* were in fact the same issues that are in dispute today. In particular, the determination that a limitation is disclosed by a prior art reference is not automatically a determination that the same-worded limitation in another claim is disclosed by the same reference. The reason for this is that, even though there is a powerful presumption that claim limitations will be construed consistently, this is not an absolute requirement even within a single claim. *See, e.g., Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1310 (Fed. Cir. 1999) (explaining that while as a general rule the same term in the same claim should be construed consistently, nevertheless a written description can set forth more than one definition of a claim term). But this is likely not a significant issue here. The scope of the preclusion sought by defendants only reaches the limitations of claim 1 as such. Thus, while it is unlikely the corresponding limitations of the other '260 patent claims will be differentiated from those in claim 1, it is a question that does not need to be resolved in this motion.

the alternative-ground argument to the extent that it relies on infringement and validity as alternative paths to the same ultimate conclusion.<sup>5</sup>

### **C. Full and Fair Opportunity to Litigate**

ChriMar has had a full and fair opportunity to litigate the issues relating to the validity of claim 1 in the *Cisco* case. The parties disputed the question of invalidity over Green Book and AMD vigorously and with extensive documentation and testimony from 31 witnesses. *Cisco*, 318 F. Supp. 2d at 502, 503, 505, 507-8; Decl. of Monte M.F. Cooper (“Cooper Decl.”), Ex. D. Moreover, ChriMar was instructed to take additional discovery in the form of depositions to the extent that any of the witness declarations relied upon by Cisco was not adequate lest Cisco witness declarations be held *de bene esse* and admissible at trial. *See* Cooper Decl., Ex. F at 5:2-19. ChriMar did not avail itself of this opportunity. *Cisco*, 318 F. Supp. 2d at 502-503. It

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<sup>5</sup> In my Report and Recommendation on the collateral estoppel issues relating to noninfringement, filed concurrently, I recommend rejection of the collateral estoppel doctrine to a claim construction holding that was one of two alternative bases for a noninfringement finding. Unlike validity and infringement, noninfringement of claim 1 is a single issue, and the *Cisco* opinion offered alternative bases that might produce that result.

While ChriMar does not raise the argument, I pause to note that the same problem does not infect the use of the Green Book and AMD Note prior art references to invalidate claim 1. Unlike “data communication lines” and “detector means,” the meanings of which raise entirely different issues, the Green Book and AMD Application Note prior art references describe the same invention, and so present the same issue of invalidity. The structure of the order treats the two references as two pieces of evidence of the same anticipation. “Cisco points to two prior art publications to establish that the invention of the ’260 patent was previously invented, publicly known, in use, and described.” *Cisco*, 318 F. Supp. 2d at 492. Moreover, after extensive discussion introducing Green Book, the Court in *Cisco* noted that the AMD Application Note was written by, “an engineer for AMD who was part of the collaborative effort that resulted in the Green Book,” and that, “[t]he AMD Application Note specifically references the Green Book.” *Id.* at 495. The Court then writes in a footnote that, with reference to similar subject matter, “the AMD Application Note is at least as enabling as the Green Book,” and that the Court’s anticipation analysis of Green Book, “applies equally to the AMD Application Note.” *Id.* at 496 n.20. The Court also notes that, “[t]he primary purpose of AMD application notes was to assist customers with new technology.” *Id.* at 507. The overwhelming emphasis of the analysis in *Cisco* is based on Green Book because the two references are so related that a disclosure in one is a disclosure in the other. For this reason it makes little sense to consider these references as separate “alternative grounds” of invalidity because, according to the Court’s reasoning they can be expected to stand or fall together, not separately, and therefore do not “alternate” in any normal sense of that word.



should not now be heard to complain that it is bound to findings that it could have contested more vigorously in the *Cisco* litigation, but chose not to.

#### **D. Fraud or Manifest Error**

Because each of the conditions necessary to collateral estoppel is present here, the doctrine appears to apply. All that is left is to analyze whether there is some problem with the underlying evidence so egregious that it requires collateral estoppel not to be applied. *See Blonder-Tongue Labs, Inc. v. Univ. of Illinois Foundation*, 402 U.S. 313, 333 (1971) (addressing as legitimate points of inquiry, “whether the opinions filed by the District Court and the reviewing court, if any, indicate that the prior case was one of those relatively rare instances where the courts wholly failed to grasp the technical subject matter and issues in suit; and whether without fault of his own the patentee was deprived of crucial evidence or witnesses in the first litigation.”). ChriMar argues that collateral estoppel should not apply because the Special Master and Judge Cohn simply misunderstood the technology in the *Cisco* case, or, alternatively, that the witnesses whose testimony led to those findings have since recanted their testimony.

ChriMar’s argument that collateral estoppel should not apply where the prior decision is in error would, if adopted, undo the benefits of collateral estoppel. The point of the doctrine is to avoid relitigating the merits of issues already decided in a prior case. If courts had to evaluate the merits of each issue in order to decide whether or not they needed to evaluate the merits of that issue, collateral estoppel would be worthless: Any judgment that estoppel did not apply because the earlier judgment was wrong on the merits would necessarily include, *a fortiori*, a conclusion *on the merits* in favor of the party opposing the estoppel. This is why the “final judgment on the merits” prong of the test (whether the four or five prong test discussed above) does not include a requirement that the final judgment in question actually be correct. Accordingly, the proper standard is extremely deferential – has ChriMar shown either fraud or manifest error? *See Aircraft Braking Sys. Corp. v. Local 856 Int’l Union, et al.*, 97 F.3d 155, 162 (6th Cir. 1996) (holding that “a fact, question or right distinctly adjudged in the original action cannot be disputed in a subsequent action, even though the determination was reached upon an

erroneous view.”). *Cf. Blonder-Tongue*, 402 U.S. at 333 (cases in which the merits inquiry trumps collateral estoppel are “rare” and require proof that the district court “wholly failed to grasp the technical issues” in the prior case).

ChriMar has not met this standard. To begin, virtually every piece of evidence relied upon by defendants in support of this motion was at issue in the *Cisco* litigation and was therefore tested in the crucible of that prior litigation. Virtually all the evidence was there found to support a finding of invalidity. *See* discussion *supra* of ChriMar’s failure to propound testimony contradicting Cisco’s *prima facie* case of invalidity based on the Green Book and AMD Application Note references. In addition, the issue of whether the Cisco decision was based on an adequate understanding of the prior art technology was already litigated in the *Cisco* case itself when Special Master Janicke’s understanding of the prior art in that case was challenged. *See Cisco*, 318 F. Supp. 2d at 490 n.14 (addressing ChriMar’s argument that the special master did not understand the technology, and holding that, “as evidenced by the extensive papers produced by the parties explaining the technology, the detailed questions posed by the special master to the experts, and the Report and Recommendations itself, the Special Master clearly understood the technology involved and issued a well-reasoned and thorough report.”).

ChriMar’s argument ultimately rests on the facially untenable premise that the entire body of evidence relied upon by the *Cisco* court was essentially a fabrication. That theory requires a vast conspiracy between each and every witness and an untold number of attorneys. In order to bolster this view, ChriMar now attempts to show that some (but not all) of the witnesses subsequently recanted their testimony, and that that constitutes evidence that the *Cisco* court’s ruling was not accurate. Plaintiff Chrimar’s Brief in Opposition to Defendants’ Joint Motion for Application of Collateral Estoppel to Bind Plaintiff to Fact Issues Regarding the “Green Book” and the “AMD Application Note” Prior Art, and Invalidity of Claim 1 of the ’260 Patent at 15 (“App.”). But ChriMar makes no specific reference to these alleged recantations in its brief. ChriMar’s brief seems to imply that the subsequent witness testimony in the present case regarding the increase of current on disconnection constitutes such a recantation. *Id.* at 15-16.

But this fact was known to the *Cisco* court. *Cisco*, 318 F. Supp. 2d at 500. Moreover, the relevant witnesses testified in deposition in the present case that their declarations in the *Cisco* case were true. Cooper Decl., Exs. DD at 147:5-148:5; BB at 115:11-116:14. ChriMar shows no instance of a witness actually recanting testimony, and as such has not proven the single fact it relies on to support its claim that the evidence was essentially a fraud.

In any event, the decision reached by the *Cisco* court was almost certainly the right one, and in any case there is simply nothing here that is remotely akin to manifest error. ChriMar argues that Special Master Janicke, Judge Cohn, and all six of defendants' witnesses in *Cisco* misunderstood how voltage worked, and that, properly understood, the Green Book and AMD Application Notes disclosed systems that would detect disconnection by voltage discontinuity only if they were equipped with a "loopback line."<sup>6</sup> All the evidence of record shows that the Green Book product was able to detect disconnection by voltage discontinuity irrespective of whether the disputed loopback line was used. In particular, neither AMD nor Green Book explicitly requires the use of a loopback line. The AMD Application Note is silent on the presence or absence of a loopback line. Cooper Decl., Ex. B. The Green Book says the use of a loopback line is "likely," but not required. *Cisco*, 318 F. Supp. 2d at 499; Cooper Decl., Ex. A at 8.

A loopback line is simply not necessary as a matter of physics to generate a voltage discontinuity when a device is disconnected from a data communication line. When a device is connected, the Green Book showed a constant voltage of 2.5V through the wires. Two different disconnection scenarios result in two different discontinuities: a jump from 2.5V to 4.3V or a drop to 0V, depending on whether a loopback line is connected. *Id.* App. at 1; *Cisco*, 318 F. Supp. 2d at 500. But since either change is a discontinuity, either one can be evidence of a disconnection, as claim 1 requires. Moreover, because the use of loopback connectors is not

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<sup>6</sup> A loopback (or wrap back) line is used to return a signal to the point of origin for that signal, for example, when the signal reaches the end of a wire. In the context of a ring network, loopback can be used to allow a signal to continue to progress through the ring when one of the member devices has been removed. *See, e.g., Cisco*, 318 F. Supp. 2d at 499.

necessary, the Green Book system could also detect disconnection using only two rather than three separate power states. *Id.* at 502.

As a result, I can find no error in Special Master Janicke's and Judge Cohn's prior determination that the Green Book and AMD Application Notes disclose each of the elements of claim 1, and certainly not the manifest error or fraud that would be required to bar application of collateral estoppel.

### **III. RECOMMENDATION**

For the reasons discussed above, I recommend that defendants' motion be granted, and that plaintiff ChriMar be precluded from contesting each finding, cited above, identified in Defendants' motion regarding either Green Book or the AMD Application Note.

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/s/

Professor Mark A. Lemley

Special Master

**Appendix A**  
**Specific Findings From *Cisco* Litigation to Which Collateral Estoppel Applies**

**Finding 1:** For purposes of 35 U.S.C. § 102(a), the conception date for the '260 patent is no earlier than November 1991. For the purposes of 35 U.S.C. § 102(b), the critical date is December 18, 1991. *Cisco*, 318 F. Supp. 2d at 502;

**Finding 2:** Chrimar did not produce a single witness to dispute the facts stated in declarations by Cisco's witnesses, nor did Chrimar depose any of Cisco's witnesses. *Id.* at 502-03;

**Finding 3:** Green Book was published on May 21, 1991, when representatives from SynOptics, AMD, Chipcom, DEC, and Motorola held a technology demonstration at DEC's facilities in Littleton, Massachusetts, which demonstration was widely reported in the press, and at which demonstration Green Book was made available and disseminated without restriction to anyone who wished to receive a copy. *Id.* at 503-05.

**Finding 4:** Green Book was freely available to anyone who requested copies from DEC and SynOptics, and copies actually were mailed to individuals who made such requests. *Id.* at 504.

**Finding 5:** Green Book also was published on June 18, 1991 when the Green Book's proponents made a presentation at a public X3T9.5 TP-PMD Committee Meeting in Minneapolis, Minnesota, that was attended by approximately 90 engineers. *Id.* at 505.

**Finding 6:** The voluminous evidence submitted by Cisco, which Chrimar did not dispute, conclusively demonstrated that the Green Book was publicly accessible. Green Book was reasonably available to the public interested in the art. Once the existence and availability of the Green Book were known, interested individuals had easy access to it. *Id.*

**Finding 7:** Numerous witnesses testified that the five companies freely distributed the Green Book to anyone who requested a copy. An interested individual certainly could have obtained a copy of Green Book with reasonable effort by either attending the May 21, 1991 demonstration in person, or by simply contacting anyone of the five companies and asking for it. *Id.* at 505-06.

**Finding 8:** The whole purpose of the five companies' collaborative effort on the Green Book, as well as the May 21, 1991 demonstration and June 18, 1991 presentation, was to create and agree on a common circuit design for FDDI-STP interoperability so that customers could use network equipment from multiple vendors interchangeably. All of Cisco's third-party witness declarations were consistent with this underlying purpose, and Chrimar did not present any evidence that any of the "Authoring Group" of Green Book did anything contrary to this purpose. *Id.* at 506.

**Finding 9:** As a whole, the uncontroverted declarations submitted by Cisco amount to clear and convincing evidence that interested persons of ordinary skill in the art, not just the "Authoring Group," could locate the Green Book prior to November 1991 after exercising reasonable diligence. As a matter of law, the Green Book is a "printed publication" under 35 U.S.C. § 102(a) & (b). *Id.*

**Finding 10:** The AMD Application Note was published in June 1991. The document itself has an issue date of June 1991 and "Publication # 15923" on its cover. *Id.* at 507.

**Finding 11:** A primary purpose of AMD Application Note was to assist customers with new technology. It was AMD's regular business practice to publicly distribute such application notes as early as possible before the application notes came out. An AMD representative prepared a

cover sheet and packet for use in responding to requests for information on FDDI-over-STP technology, which attached both the Green Book and the AMD Application Note. *Id.*

**Finding 12:** Copies of the AMD Application Note were actually provided to AMD's customers, sales force, and FAEs. Multiple copies of application notes were distributed to AMD field offices once a month so that customers could obtain copies by calling the AMD field offices. *Id.*

**Finding 13:** AMD's general policy was to use application notes as promotional tools. It sought to disseminate them as widely as possible to generate sales. The AMD Application Note was actually sent to customers, sales force, and FAEs. *Id.*

**Finding 14:** AMD published multiple application notes and made them all publicly available and indexed for retrieval. Although the AMD Application Note did not receive the level of media coverage given to Green Book, evidence of actual dissemination more than makes up for the lack of publicity an interested person of ordinary skill could locate the AMD Application Note with reasonable effort. *Id.*

**Finding 15:** As a matter of law, the AMD Application Note is a "printed publication" under 35 U.S.C. §§ 102(a) and (b). *Id.*

**Finding 17:** The AMD Application Note contains a more detailed disclosure than the "cable detect" circuit, which is similar to that of Green Book. Consequently, the AMD Application Note is at least as enabling as the Green Book. Everyone of the Court's conclusions concerning anticipation by Green Book applies equally to the AMD Application Note. *Cisco*, 318 F. Supp. 2d at 496 n.20.

**Finding 18:** Green Book discloses multiple current loops within the meaning of claim 1, each loop including pairs of copper data communication lines contained in the cable that connect individual computers to the FDDI network via the concentrators. *Id.* at 496-499.

**Finding 19:** It is unnecessary to enable an entire "network" to satisfy the "current loop means" element of claim 1. *Id.* at 496-97. However, even if enablement of a "network" were required to satisfy the "current loop means" element of claim 1, Green Book discloses how to create a traditional local area network (LAN) by connecting a workstation to a FDDI concentrator through STP cable in a star configuration. *Id.* at 496-97.

**Finding 20:** The only changes needed to implement the Green Book in a working FDDI-over-STP network were the use of STP cables instead of optical fiber and the replacement of the optical transceiver (PMD) in the FDDI NIC with an electrical transceiver (PMD). Green Book fully discloses all of the necessary elements to make a "network" within the meaning of claim 1. *Id.*

**Finding 21:** Green Book discloses "existing internal circuitry" within the meaning of claim 1 by virtue of its disclosure of centertapped isolation transformers. *Id.* at 498.

**Finding 22:** Green Book discloses the use of "respective pairs of data communication lines [that] are associated with different ones of the associated pieces of equipment" within the meaning of claim 1. Green Book's FDDI-over-STP implementation is a physical star configuration with logical ring flow. *Id.* at 498-99.

**Finding 23:** How the data flows in the network is irrelevant; claim 1 only requires that a physical data communication pair associated with one particular piece of equipment. *Id.* at 498.



**Finding 24:** In the "cable detect" circuit, the upper and lower pairs of wires extend from the M-port of the concentrator to the Sport of one particular piece of equipment. Further, data flows directly between the equipment and the concentrator in a FDDIover-STP network just as it does between equipment and the hub in the '260 patent; hence, there is at least a one-to-one correspondence between the data communication lines connecting the concentrator and the equipment from the logical perspective as well. *Id.*

**Finding 25:** The Green Book contains an enabling disclosure of "current loop means" because it discloses a current loop over a pair of data communication lines that connect a piece of electronic equipment to a network through existing internal circuitry. Enablement of the associated network is not required. The Green Book discloses pairs of data communication lines (STP cable) physically connected to one particular piece of equipment. *Id.* at 499.

**Finding 26:** The Green Book uses a 5 volt DC power supply to inject a low DC current onto the data communication lines, which power supply corresponds to input terminal 25 and isolation power supply 26 in the '260 patent. Hence, there is a source means in Green Book. *Id.*

**Finding 27:** The 650 ohm resistor in Green Book is a "detector means" because it is in the same circuit position as resistor R2 in the '260 patent and different voltages are applied across it depending on whether current is flowing in the loop. Here, the 650 ohm resistor is capable of providing an indication of a change of current flow from 2.5 V to 0 V, which represents disconnection of a computer. That is all that is necessary to meet the "detector means" limitation of claim 1. *Id.* at 501, 502.

**Finding 28:** In Green Book, the circuitry downstream of the 650 ohm resistor that measures the V L1 voltage signal is irrelevant to whether the 650 ohm resistor is a detector means. Like

the '260 patent, circuitry downstream of a resistor determines how to respond to a change in current signal. However, that circuitry is not part of the corresponding "detector means" in the '260 patent. *Id.* at 501.

**Finding 29:** The "cable detect" circuit checks the V L1 voltage signal to determine if a computer is disconnected - it is 2.5 V when connected and 0 V when disconnected. Chrimar's own demonstration to the Court at the hearing on Chrimar's objections to the Special Master's R&R confirmed that the Green Book works for this purpose because an alarm sounded when the computer was disconnected from the cable. *Id.*

**Finding 30:** The fact that later circuitry can also detect the operation of a wrap-back connector (through a 4.3 V signal) does not mean the 650 ohm resistor is not a "detector means." The 650 ohm resistor is still capable of providing an indication of a change in current flow from 2.5 V to 0 V, which represents disconnection of a computer. When wrap-back connectors are not used, there are only two possible V L1 voltage levels. In that case, the 650 ohm resistor would operate exactly the same as the resistor R2 if the alarm circuitry of the '260 patent preferred embodiment were added downstream. *Id.* at 501-02.

**Finding 31:** Green Book does not say that the use of wrap-back connectors is essential; it merely says it is "likely" that a cable with wrap-back connectors will be used. Chrimar produced no testimony from anyone knowledgeable with the creation of Green Book who claimed the sole embodiment of the Green Book used wrap-back connectors. *Id.* at 502.

**Finding 32:** Reducing the Green Book to practice and then substituting it for part of the '260 patent preferred embodiment to see if that circuit still "works" is not an appropriate mode of

analysis for anticipation. *Id.* Anticipation must be determined by comparing the anticipatory reference to the language of the claim as interpreted by the Court. *Id.*

**Finding 33:** The Green Book contains an enabling disclosure of "detector means" because the disclosed "cable detect" circuit is capable of providing an indication of a change in current flow which represents disconnection of a piece of electronic equipment from the network. The additional capabilities of detecting the operation of a wrap-back connector does not mean that the Green Book does not anticipate the claimed invention. *Id.*

**Finding 34:** The May 21, 1991 demonstration of the Green Book circuit constituted prior use. Numerous witnesses said that the demonstration was public. It is clear that the demonstrators did not specifically limit attendance to members of the five companies. The demonstration and announcement were advertised in the May 20, 1991 issue of *Communications Week*. *Cisco*, 318 F. Supp. 2d at 507-08.

**Finding 35:** At the May 21, 1991 technology demonstration, DEC, Chipcom, and SynOptics each provided concentrators, and all five companies provided computer workstations. As demonstrated on May 21, 1991, each concentrator used multiple DC current loops originating at the M-ports of concentrators and extending over copper wires to the associated S-ports of individual computers which implemented the cable detect function of Green Book. There, each concentrator used was connected to multiple computers forming a LAN. Thus, Chrimar admitted that the demonstration "implemented" the Green Book's "cable detect" circuit, which itself anticipates claim 1. *Id.* at 508.

**Finding 36:** Numerous witnesses confirmed that the demonstration worked to implement the solution set forth in the Green Book, including the "cable detect" circuit. Hence, the May 21,

1991 demonstration constituted public use of a circuit with one or more electronic components capable of providing an indication of a change in current flow which represents disconnection of a piece of electronic equipment from the network. *Id.*

**Finding 37:** Regarding the knowledge component of 35 U.S.C. § 102(a), because the Green Book and the AMD Application Note were publicly accessible as "printed publications," they were also sufficiently available as public knowledge. The May 21, 1991 demonstration shows the state of public knowledge at the time. *Id.*

**Finding 38:** Public use and knowledge under 35 U.S.C. § 102(a) constitute additional grounds for invalidating claim 1 of the '260 patent. *Id.*

### **CERTIFICATE OF SERVICE**

The undersigned certifies that the foregoing document was filed electronically in compliance with Local Rule CV-5(a). As such, the foregoing was served on all counsel who have consented to electronic service. Local Rule CV-5(a)(3)(A). Pursuant to Fed. R. Civ. P. 5( d) and Local Rule CV -5( d), all others not deemed to have consented to electronic service will be served with a true and correct copy of the foregoing via email or U.S. mail.

Dated: December 15, 2009

Respectfully submitted:

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/s/

Professor Mark A. Lemley  
Special Master